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Do Workers with Low Lifetime Earnings Really Have Low Earnings Every Year?: Implications for Social Security Reform

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I. INTRODUCTION

When it comes to retirement income policy, there is a general perception that workers have full 40-year working careers before retiring. It is even assumed that workers with low lifetime earnings have low earnings in each and every year during a normal working career. For example, the Social Security Administration's Office of the Actuary uses 3 or 4 stylized workers for their distributional analysis (see, for example, appendix II in Social Security Advisory Council 1997) with the lifetime low-wage earner earning 45 percent of the economy-wide annual wage every year for 40 years. Likewise the average wage and high-wage earners are assumed to have 40-year working careers. Minimum wage workers are assumed to have at least 30-year working careers earning the minimum wage (see, for example, the January 31, 2002 memorandum from the Social Security Administration's Chief Actuary and Deputy Chief Actuary in Appendix II of Commission to Strengthen Social Security 2001).

In a recent study by Social Security Administration actuaries (Nichols, Clingman and Glanz 2001), the authors created hypothetical scaled workers to supplement their analysis with the hypothetical steady workers. These scaled workers have career earnings that "start out at a relatively low level..., increase rapidly and peak in mid career, and then level out or even decline somewhat in later years" or have an inverted U-shape pattern over the working career. Again, these scaled workers have 40-year working careers. Casual observation and empirical analysis shows that these steady and scaled 40-year hypothetical earnings histories are simply not realistic. In a 1997 study, the General Accounting Office notes that the median number of years with earnings for men reaching age 62 in 1993 was 36; the median for women was 25 years of earnings. Clearly, many people have at least some years with no earnings during their working careers. Bosworth, Burtless and Steuerle (1999) show that many men and most women do not have earnings patterns that are steady or display the inverted U-

shape. Other research suggests that many minimum wage workers are not lifetime steady minimum wage workers. Smith and Vavrichek (1992) show that after one year, only one-in-four minimum wage workers still earn the minimum wage, 27 percent are unemployed or not-in-the-labor force, and the remainder earn above the minimum wage.

The stylized workers used for distributional analysis by the Social Security Administration actuaries, however, are not without empirical and theoretical justification. The standard human capital earnings function captures the observed concavity of the age-earnings profile (i.e., the inverted U-shape) as a quadratic in potential work experience (Mincer 1974). This specification has been used in hundreds of empirical studies. This concave shape holds for workers of all educational categories.¹ The intuitive idea behind this shape is that as younger workers gain experience and on-the-job training they become more productive and, therefore, their earnings grow. Later in the career, both employers and workers invest less in the human capital development of the worker since the net return may be zero or negative. Consequently, earnings tend to level out in mid-career and may even fall before retirement.

But the concave age-earnings is what is observed for the “average” worker and may not represent the lifetime earnings pattern of any individual worker. Researchers have documented that even within very homogeneous demographic categories (for example based on sex, race, birth cohort, and education) earnings are extraordinarily heterogeneous. Bowles, Gintis and Osborne (2001) argue that there are huge differences among individuals who are the same age, and have the same educational levels, job experience, school grades, and training. And many of these differences affect earnings. Some of these differences are readily observable (such as race and beauty) while others are not (such as motivation and time preference).

Bosworth, Burtless and Steuerle (1999) describe the diversity of earnings among groups based on sex, birth cohort and education. They have classified workers into one of

¹ Murphy and Welch (1990) show that while the age-earnings profile is concave, the quadratic specification does not fit the data well.

nine lifetime earnings pattern categories based on (1) the average lifetime earnings level (high, average, low), and (2) the trend in earnings (rising, level, declining) over the working years. They show that most workers do not have lifetime earnings patterns described by the Social Security Administration's stylized workers or by the human capital earnings function. They further show that earnings patterns can have some effect on the level of retirement income but their analysis is based on nine composite or stylized workers that have full 40-year working careers with no unemployment spells.

There are two main problems with using stylized workers with 40-year working careers based on averaged annual earnings for some groups. First, diversity in career earnings patterns are essentially assumed away and earnings are assumed to be a function solely of education and experience (as in the human capital earnings function). This ignores the many other factors influencing earnings. Second, years without earnings are simply averaged away. The reality, however, is many low-wage workers, especially women, spend time with no or little earnings.

This paper focuses on the earnings histories of workers with low lifetime average earnings. The basic research question is why do some workers have low lifetime average earnings? Is it due to low earnings in every year or is it due to some years of no earnings combined with years of relatively modest earnings? The results of this study will provide policy makers and analysts with better information of lifetime low earners. Also this information will help policy makers design provisions to better protect these workers under individual retirement account programs (for example, under Social Security reform, expansion of 401(k) pension coverage, government sponsored individual accounts such as former President Clinton's proposed USA accounts or President Bush's Lifetime Savings Accounts and Retirement Savings Accounts). Different earnings patterns lead to different retirement income levels, especially retirement income based on accumulations in individual accounts (Hungerford 2000). The results will provide the general public with more information to judge the feasibility and desirability of individual retirement account programs.

The paper is organized as follows: the next section shows how retirement income is determined under Social Security and defined contribution pension plans. Some of the issues surrounding Social Security reform are discussed in section III. The data used for this study are described in section IV. The results are presented in section V. Lastly, concluding observations are offered in section VI.

II. HOW RETIREMENT INCOME IS DETERMINED

Current law Social Security is like a defined benefit pension (DB) plan in that the promised benefit is based on a specified formula of earnings. Benefit levels for Social Security or Old-Age and Survivors Insurance (OASI) are based on lifetime earnings averaged over the 35 years with highest indexed earnings.² Social Security is designed to help low earning workers in two ways. First, the benefit formula is progressive in that lower earning workers receive a higher proportional benefit (relative to their lifetime earnings) than higher earning workers. In other words, Social Security replaces a higher proportion of lifetime earnings for lower wage workers than for higher wage workers. Second, there is a special minimum benefit to reward “regular” long-term low earning workers. The number of Social Security beneficiaries entitled to a special minimum benefit, however, was about 134,000 in December 2001 (0.3 percent of all Social Security beneficiaries) and only about 79,000 actually received a higher overall benefit because of the special minimum. The special minimum is projected to help no retired workers attaining eligibility after 2013 (Olsen and Hoffmeyer 2001/2002). Clearly, the special minimum benefit is not designed to help many retired workers.³

² Earnings are indexed by Social Security’s average wage index rather than the consumer price index.

³ The special minimum benefit essentially replaced the regular minimum benefit which was eliminated for workers reaching age 62 after 1981. The regular minimum benefit was designed to help persons with low lifetime average earnings but as Myers (1993) claims “many, if not most, persons getting the regular minimum did so because they were only intermittently in covered employment and often [had] other pension income from noncovered employment” (p. 252).

Under the current law Social Security benefit formula, when the earnings were received in the work career (that is, the timing) does not enter into the benefit formula—an indexed dollar at age 22 counts as much as an indexed dollar at age 60 as long as both years are included in the 35 years with highest earnings. Even for the special minimum benefit what counts is the number of years with covered earnings and not when those wages were earned.

The defined contribution (DC) plan is now the dominant pension plan with the 401(k) plan the most well-known DC plan. In a DC plan the pension benefit is based on how much is contributed to the plan account and the investment returns. Research has shown that the timing of earnings during the lifetime profoundly affects balances in individual retirement accounts, such as 401(k) plans, due to the effects of compounding (see, for example, Hungerford 2000). A dollar saved early in the working career will yield more retirement income than a dollar saved late in the career (assuming positive investment returns) because of compound interest.

Social Security and DC pensions also differ in how benefits are paid. Social Security pays a benefit which is fixed in real terms—it is updated annually for cost of living increases. DC pension accumulations may be paid out as a lump-sum at retirement or a life annuity may be purchased. In many instances, the life annuity pays a benefit which is fixed in nominal terms, consequently, the purchasing power of the annuity payment falls over time.⁴

The major difference between these two retirement income sources is how spouses are treated. Under Social Security, a worker's spouse receives the highest Social Security benefit for which she (sticking with traditional stereotypes) is eligible (a retired worker benefit based on her own earnings or a spouse benefit based on her husband's earnings). After the death of the worker, his widow will receive a survivor's benefit. With a pension annuity, the worker

Congress was concerned that the regular minimum benefit provided windfalls for persons who had little connection with the covered workforce. The special minimum is generally not payable to low earning workers with less than 23 years of covered earnings (Olsen and Hoffmeyer 2001/2002).

⁴ Many insurance companies also offer an annuity with an increasing nominal payment for

can purchase a joint and survivor annuity which will provide a benefit to the surviving spouse.⁵

What this means for retirement income can best be illustrated with the following example. Assume a married couple with a working husband who earned the average wage every year during a 40-year working career and a nonworking wife. Both are 66 years of age and the husband retires in 2003. The husband will receive a monthly Social Security benefit of \$1,215 and the wife will receive a monthly spouse benefit of \$573 (see table 1). The total Social Security income this couple receives is \$1,788 per month. When the worker dies his widow will receive a Social Security benefit of \$1,146 per month.

Suppose the working husband has a \$225,000 retirement account balance and purchases a retirement annuity with a 4 percent interest rate.⁶ If he purchased a single-life annuity with indexed payments the couple would receive \$1,224 per month (in 2003 dollars) until the worker dies (see table 1) after which his widow would receive nothing. If the worker had purchased a joint and survivor annuity the couple would receive a total family payment of \$1,209 per month for a 50 percent survivor option or \$963 per month for a 100 percent survivor option. After the death of the worker, the surviving widow would receive \$604 under the 50 percent survivor option or \$963 per month under the 100 percent survivor option.

This illustrative example highlights the fundamental difference between Social Security and pension annuities. With Social Security, a nonworking spouse will receive a benefit which increases total family retirement income.⁷ With an annuity, the only way a spouse can

purchase which approximately keeps the payment fixed in real terms.

⁵ Since the Retirement Equity Act of 1984 was passed, a joint and survivor annuity is the normal payout option for married retirees. Written spousal consent is required for the retiree to choose another option such as a single-life annuity.

⁶ This is the annuity interest rate available to federal workers under the Thrift Savings Plan (TSP) in March 2003. The annuity payments reported here were calculated using the TSP annuity calculator at <http://www.tsp.gov>.

⁷ The Social Security spouse benefit has raised fairness issues regarding the treatment of single earner couples compared to dual earner couples. This issue is not dealt with here.

increase total family retirement income is by receiving a payment based on her own earnings over a working career.

III. SOCIAL SECURITY REFORM

The Social Security Trustees (Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds 2003) project that the Social Security trust funds will be depleted in 2042.⁸ Over the past decade several reform proposals to address the so-called long-term financing problem of Social Security have included some form of privatized retirement accounts.⁹ Two of the three proposals from the 1994-96 Social Security Advisory Council advocated individual Social Security accounts as did all of the recent Commission to Strengthen Social Security proposals.¹⁰ All of the individual account proposals would lower the traditional Social Security benefit and divert part of the current payroll tax to an individual's retirement account. At retirement the worker's Social Security retirement income would be the sum of the lower traditional benefit and an annuity payment from the individual account. Proponents claim that workers would receive a higher overall benefit than under current law Social Security because the annuity from the individual account would more than make-up for the lower traditional benefit.

The proponents of these proposals, however, all expressed concern about how lifetime low earners would fare under their plan and all the plans added special provisions for lifetime low earners (with at least 30 to 35 years of covered earnings). However, the

⁸ It should be noted that the Trustees also report depletion dates for two alternative sets of assumptions. Under the high cost assumption the depletion date is 2031 and under the low cost assumptions the trust fund is solvent over the next 75 years.

⁹ Baker and Weisbrot (1999) and Papadimitriou and Wray (1999) argue that Social Security is not facing a crisis and question whether it really needs saving.

¹⁰ The Commission members were directed to develop proposals which "strengthen Social Security" and meet the President's principles. One of the key principles is "modernization must include individually controlled, voluntary personal retirement accounts, which will augment the Social Security safety net." See Wray (2001) for a short critique of the Commission's draft

illustrative examples of how various people would fare under the proposals assumed that low earners had a lifetime of low and steady earnings (for example, a 40-year career of earning the minimum wage). Given that an increasing share of total family retirement income depends on earnings of all family members, it is important to have knowledge of the actual earnings patterns of lifetime low-wage workers.

IV. THE DATA

The ideal data source would be Social Security earnings records merged onto the Survey of Income and Program Participation or the Health and Retirement Study. However, this data is neither publicly available nor readily available at a reasonable cost. Two publicly available datasets, however, provide a suitable substitute: (1) the Current Population Survey (CPS)/Social Security Summary Earnings (SER) exact match file, March 1978, and (2) the Panel Study of Income Dynamics (PSID). There are strengths and weaknesses to both datasets. Unfortunately neither dataset provides earnings over a 40-year period.

The CPS/SER contains demographic information from the March 1978 annual demographic file and annual Social Security covered earnings information from 1951 to 1977 (27 years). Earnings from the SER are only available for CPS respondents who provided a valid Social Security number (SSN)Cthere may be some biases introduced due to selection effects (that is, the people who choose to not give their SSN may not be randomly chosen). In addition, only earnings subject to the Social Security payroll tax are included in the data so some years with zero earnings recorded are actually years with earnings that are not covered by Social Security. That said, the earnings data are of the highest quality because this is the information that SSA uses to determine benefits and comes from tax records provided by the employer.

report.

The PSID is a nationally representative longitudinal dataset that has been ongoing since 1968. The PSID has very detailed information for household heads and their spouses for over 30 years. The earnings are self-reported and include all earnings, not just Social Security covered earnings.

These two datasets were statistically matched together to create a dataset of individuals born between 1926 and 1934 with 40 years of earnings information recorded from age 22 to 61. This was accomplished in three steps. First, a sample was selected from the PSID of individuals turning 62 between 1988 and 1996—the 1926-34 or depression era birth cohort. Next, earnings data from observations in the CPS/SER were matched to the PSID sample based on demographic characteristics in 1978 (age, sex, education, race/ethnicity, number of children under 18, and marital status), and the earnings level and patterns (number of years with zero earnings) between 1973 and 1977. Lastly, individuals with missing (as opposed to zero) earnings during the first three years of their working career (those who turned 22 before 1951) had their earnings for those years imputed using a hotdeck imputation process. Only individuals with at least 10 years of earnings above the amount needed for one quarter of coverage (those potentially eligible for Social Security benefits based on their own earnings) were selected to yield an analysis sample of 786 individuals—374 men and 412 women.

V. RESULTS

Low-wage or minimum wage workers are defined as having lifetime average indexed earnings between 60 percent and 150 percent of the annual earnings of a full-time minimum wage worker. The average real minimum wage from the 1970s was chosen as the base (\$6.26 per hour in 1999 dollars, see Mishel, Bernstein and Schmitt 2001); minimum wage workers, therefore, have lifetime average indexed earnings between \$7,500 and \$18,750 (in 1999 dollars). The upper bound is less than 150 percent of the 1999 poverty threshold for a family

of three and the lower bound is less than the 1999 poverty threshold for a single individual. Individuals were assigned to one of three lifetime earnings categories—subminimum, minimum and above minimum wage. The distribution of the sample among these categories by sex is shown in table 2. As can be seen, very few men are lifetime subminimum or minimum wage workers.

The average number of years with positive earnings¹¹ for each of the three groups is shown in figure 1 (the maximum is 40 years). Since only 5 men in the sample have subminimum wage lifetime average earnings this category is omitted from the analysis. Two points are worth highlighting. First, within each earnings category, men, on average, have more years with earnings than women. Further analysis shows that the differences tend to be confined to the first two decades of the working careers (that is, between ages 22 and 41). Women spend more years out of the workforce than men in their twenties and thirties suggesting the differences are due to child bearing and rearing responsibilities. Second, lifetime low-wage (subminimum and minimum wage) workers appear to have lower lifetime average earnings because of fewer years of positive earnings rather than a full lifetime working career of low earnings.

Only earnings between the ages of 22 and 61 are examined, however. It is possible some of these individuals continued working after reaching age 62¹² and will have considerably more years of positive earnings by the time they completely withdraw from the labor force. Also, three-fourths of the women with subminimum and minimum wage lifetime average earnings are married and may be eligible for a higher spouse benefit than retired worker benefit—one of the built-in protections of Social Security.

Figure 2 shows the distribution of years with positive earnings that are behind the

¹¹ A year with positive earnings is defined as a year in which annual earnings were greater than 2.5 percent of economy-wide average earnings (approximately the amount needed for 1 quarter of Social Security coverage).

¹² Employment during the retirement years is fairly common and has been called the poor person's pension.

averages reported in figure 1. Again, gender differences are quite apparent. For example, 26 percent of men with minimum wage lifetime average earnings have fewer than 25 years of positive earnings compared to 44 percent of women in the same earnings category.

Furthermore, about one in five women with minimum wage lifetime average earnings have less than 20 years of positive earnings and three-fourths have fewer than 30 years of positive earnings. Similarly, 70 percent of women with subminimum wage lifetime average earnings have less than 20 years of positive earnings. Clearly, the reason many women have low lifetime average earnings is because of few years of earnings and, consequently, may not be eligible for the special provisions protecting low wage workers under many privatization proposals.

The analysis in this paper was based on the depression era birth cohort born between 1926 and 1934. Given trends in labor participation especially, among women, the experiences of this cohort may not be representative of the experiences we can expect of younger birth cohorts such as the baby boomers who will become eligible for Social Security retirement benefits in 2008. It is a useful exercise to compare the depression era cohort to their children in the early baby boom cohort born between 1946 and 1954.¹³ To determine similarities between these cohorts, earnings patterns in the second decade of the working career (ages 32 to 41) are compared. The second decade was chosen because most individuals are finished with their schooling and have settled into a lifetime career by age 32. Furthermore, the correlation between average lifetime earnings and average earnings over the years between 32 and 41 is 0.91 (0.76 for men and 0.78 for women) for the depression era cohort. Most workers who have subminimum or minimum wage average earnings in the second decade of their working careers also have subminimum or minimum lifetime wage average earnings (77 percent for men and 96 percent for women). Therefore, average earnings between the ages of 32 and 41 are probably somewhat indicative of lifetime average earnings.

¹³ Future cohorts will most likely have earnings patterns more similar to the baby boom cohort than to the depression era cohort.

In table 3, the top panel (panel A) shows the second decade results for the depression era cohort and the bottom panel (panel B) shows the results for the early baby boom cohort. The first row of each panel shows the average number of years with positive earnings between the ages of 32 and 41 for men and women in the three average earnings categories (the earnings categories are based on average earnings between the ages of 32 and 41). For the most part, the averages are very close. The exceptions are for women with subminimum and minimum wage average earnings—the baby boomers in these categories have about one year more of earnings, on average, than similarly placed women in the depression era cohort.

The next row in each panel shows the average number of years with above minimum wage earnings (that is, annual earnings above 150 percent of the minimum wage). Again, there is not much difference between the two cohorts. Those with above minimum wage average earnings experience above minimum wage earnings in almost all years with earnings, the opposite is true for subminimum wage workers.

The major difference between the two cohorts is the distribution among the average earnings categories, especially for women. For men, over 90 percent in both cohorts are above minimum wage workers. For women, only 17 percent of the depression era cohort had above minimum wage average earnings, but almost half (46 percent) of the early baby boomers had above minimum wage average earnings. Conversely, slightly over half of the early baby boom women had subminimum or minimum wage average earnings. If the relation between average earnings in the second decade of the working career and lifetime average earnings holds for the early baby boomers as it did for the depression era cohort, then almost half of women baby boomers could have subminimum or minimum wage lifetime average earnings when they retire. Very few men are expected to have minimum wage lifetime average earnings.

Three caveats are in order, however. First, all individuals in the depression era cohort sample survived to age 62. Some of the early baby boomers will not survive to age 62, especially individuals with lower income. This could slightly decrease the proportion of baby boomers with expected low lifetime average earnings. But given mortality trends, a higher

proportion of baby boomers will survive to age 62 than individuals born in the depression era. Second, all the individuals in the depression era cohort sample had at least 10 years of earnings by the age of 62. It may be that a number of low-wage women baby boomers may not have 10 years of earnings by the time they reach age 62 and will not be eligible to receive a benefit based on their own earnings record. But given the increased labor force participation of women baby boomers, it is likely that most will have at least 10 years of earnings. Third, recent immigrants are not adequately represented in the PSID. New immigrants tend to have lower earnings than natives. Consequently, many recent immigrants may have relatively low lifetime earnings which could increase the ultimate proportion of baby boomers with subminimum and minimum wage lifetime average earnings.

Furthermore, in recent research, Butrica, Iams and Smith (2003) compare the retirement income of the depression era cohort with the projected retirement income of the baby boom cohort. They project that female baby boomers will be more likely to receive retirement benefits based on their own earnings (rather than on a spouse's earnings) than women in the depression era cohort. However, they also project that about 30 percent of women and 15 percent of men in the early baby boom cohort will have less than 80 quarters (20 years) of Social Security covered earnings.¹⁴ A nontrivial number of baby boomers will have low lifetime earnings because of few years with Social Security covered earnings.

VI. CONCLUDING REMARKS AND POLICY IMPLICATION

There are three key findings from this paper. First, most individuals with minimum (and subminimum) wage lifetime average earnings are women. Second, most of these women have low lifetime average earnings because of fewer years with earnings rather than low earnings in

¹⁴ Unfortunately, their tabulations lump together those with 80 or more covered quarters into a single category so individuals with 20 to 25 years of covered earnings cannot be separated from those with 25 to 30 years of earnings.

each and every year of a 40-year working career. Third, even with the trend toward increased labor force participation among women, a substantial number of women in future cohorts most likely will experience low lifetime average earnings.

By basing the earnings of stylized workers on annual averages calculated from a human capital earnings function, for example, much of the diversity in earnings is assumed away. If the diversity of the inputs into the calculation of retirement income such as Social Security benefits is averaged away, then the diversity in retirement income is also averaged away. It will be impossible to determine the true range of outcomes of policy measures that affect retirement income or to create meaningful provisions to protect the least well-off. As Quinn (1987) admonishes “Beware of the mean.”

These findings have important implications for Social Security reform. Many reform proposals would privatize a portion of Social Security. As shown, under a system of privatized accounts the level of total family retirement income will depend to a large extent on the earnings histories of both the husband and wife. Most proposals have special provisions to protect low-wage workers with 30 or 35 years of earnings, but many women with low lifetime average earnings will not be able to take full advantage of these provisions because they have too few years with covered earnings. Given the lifetime earnings patterns of women, the President’s Commission to Strengthen Social Security claim that their reform models will improve protections for women may simply not be true for many women. Ultimately, how lifetime low-earning women fare under Social Security reform depends on how traditional spouse and survivor benefits are changed. Retaining the current system for these auxiliary benefits could go a long way toward protecting these women. But given the relatively high divorce rates among the baby boomers and subsequent generations, many low-earning women may be divorced at retirement (and with no marriage(s) lasting at least 10 years—the minimum marriage duration necessary to be eligible for divorced spouse benefits) and, therefore, not eligible for the auxiliary benefits. Butrica, Iams and Smith (2003) project that there will be “many more unmarried females and unmarried Blacks in the future retiree

population” (p. 4).

The Social Security Administration has recently developed a microsimulation model to project the distributional impacts of changes in the Social Security program on future retirees (see Toder and others 1999, and Panis and Lillard 1999). The goal of the model is to determine who the winners and losers will be under various changes to the program. This model should prove to be a useful tool in developing various provisions of reform proposals and for providing a fuller picture of how reform proposals will affect future beneficiaries. It is somewhat of a mystery why this model was not used by the President’s Commission to Strengthen Social Security.

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Table 1: Illustrative Example of Social Security Benefits and Annuity Payment

	Social Security	Pension Annuity	
Single	\$1,215	\$1,224	
		Joint and Survivor Annuity	
		50% Survivor	100% Survivor
Couple	\$1,788	\$1,209	\$963
Survivor	\$1,146	\$604	\$963

Note: Assumes both husband and wife are 66 years old and retire in March 2003. The annuity interest rate is 4 percent and calculated using the TSP annuity calculator at www.tsp.gov. Annuity payments increase with the consumer price index.

Table 2: Weighted Distribution Among Lifetime Earnings Categories (number of observations in parenthesis)

	Men	Women
Subminimum	0.47 (5)	31.14 (141)
Minimum	4.61 (30)	42.37 (180)
Above Minimum	94.92 (339)	26.49 (91)

Source: Author's analysis of PSID.

Table 3: Distribution of years with positive earnings between the ages of 32 and 41

	Men			Women		
	Subminimum	Minimum	Above Minimum	Subminimum	Minimum	Above Minimum
Panel A: 1926-34 Birth Cohort						
Average Number of Years with Positive Earnings	4.3	8.3	9.9	3.3	7.6	9.5
Average Number of Years with Earnings Above Minimum	0.7	3.7	9.6	0.2	2.6	8.1
Weighted Percent	0.7	5.4	93.8	53.0	30.0	17.1
Panel B: 1946-54 Birth Cohort						
Average Number of Years with Positive Earnings	4.5	8.8	9.8	4.1	8.6	9.6
Average Number of Years with Earnings Above Minimum	0.2	3.5	9.3	0.1	2.5	8.6
Weighted Percent	2.1	6.8	91.2	30.0	24.4	45.6

Source: Author's analysis of PSID.

Figure 1: Average Number of Years with Positive Earnings: Ages 22-61

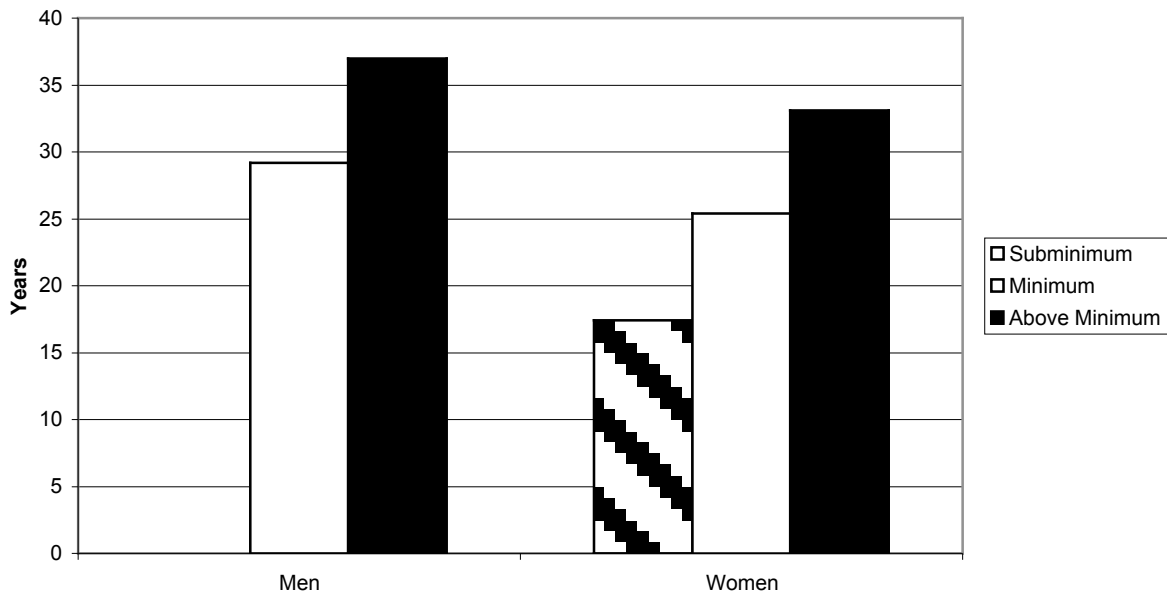


Figure 2: Distribution of Years with Positive Earnings: Ages 22-61

